

CHILDREN'S CREATIVE DEVELOPMENT TRAINING PROGRAM

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ABSTRACT

This paper reports on the annual summer training program of children's creative development conducted since 1986. The training targets per program are between 80-100 children aged between 9-14 years coming from various urban and rural parts of Thailand to join the 8-10 day program for moral and technical development. The program is planned and coordinated by the author with considerable inputs from Buddha's teaching in self-reliance: the potential of human beings to prevent their defilement; and from people who expertise in architecture and technology. The method approached for explaining human performance in nature, is a simulation game designed by the author with the help of her colleague in computers. The model concept is derived from a system dynamics method as a tool for dissemination of the law of cause-effect action in Buddhism. The children evaluated joyfully and rapidly understood the mechanism of mind in decision making whether to conduct good or bad actions according to the Buddha's principle by playing and thinking themselves with this simulation game in a better way than they do in the traditional method of lectures by monks or teachers. The game simulates the interaction relationship between a human's performance and his life expectancy. Later the workshop practice of the electronic application is approached for systematic problem-solving about peoples' needs in terms of technological development in relation to promotion of moral values.

1. INTRODUCTION

Presently, children and youths (1) of Thailand, accounting for 30 million, represent half of the total population. Most of them, especially in the major cities, live in nuclear families unlike the collective ones of 30 years ago. The changes in family living patterns due to the growth of economic and social activities result in an absence of traditional ethics dissemination between old and new generations within the family society. In addition the children are sent to school early and exposed to material oriented competition since both the father and mother have to go out to work and nobody takes care of them at home.

The rapid explosion of technology in modern society affects the pattern of man's living, earning, learning and playing in daily life. The ways he thinks and performs in any situation and

(1) children age between 7-14 years, youth age between 14-18 years

environment motivates the technology to be developed and used much more desire oriented.

According to Buddha's Teaching, Everything within the world has naturally three characteristics of existence : 1. impermanent, changing overtime. 2. suffering to maintain existing condition forever and 3. inability to stop this change. Without ultimate true knowledge, human beings attempt to control these changes to meet their desires with delusion. Buddha found that these desires are the original causes of human suffering or problems. Human desires are classified into three patterns as follows : 1.the desire to obtain or own 2. the desire to be and 3. the desire not to be as existing.

A positive feedback to the desire usually results in more greed while negative feedback often causes anger. The greed, anger and delusion are internal defilement affecting human behavior which has an effect on the environment. An increased pollution in the environment leads to an increased internal defilement in human being. However, the problem exists even when man beautifies his environment. It might affect the internal defilement because moderation in man's satisfaction is seldom maintained. The more there is a gap between the natural changing rate and human force in changing rate, the more the suffering unless one realises the mechanisms of internal changing and its effects. Most teaching in schools and the home exposes learners to external learning and ignores the importance of internal awareness which is the path to self regulation. Whether the rapid growth of technology development without self control accrues to a better living and global understanding or to a greater competition and hatred at present and the next generation is debatable.

The Children's Creative Development Training Program is introduced to help parents and teachers in training children and youth for a better understanding of human nature and how to improve creative thinking, speaking and acting through themselves and teamwork towards technology innovation and the use of technology in modern society with more wisdom ,self-reliance and generosity. The program structure is mainly composed of four components : knowledge, thought, goodness and physical development. A Computer simulation game is approached as an introduction and as a connection between the program contents and activities. What will be focused on in this paper, is the concept, design, experiment and impact of the game on the trainees during and after the training course.

2. BUDDHIST CONCEPTS IMPARTED TO THE TRAINING

2.1 CONCEPT OF HUMAN NATURE

(a) In Buddhism, an individual human life comprises 2 parts which are the body and mind. The body is formed by 5 elements namely solid, liquid, air, space and heat elements and deals with physical balance while mind is the consciousness element and

deals with feelings, perceptions, intentions and acts of consciousness.

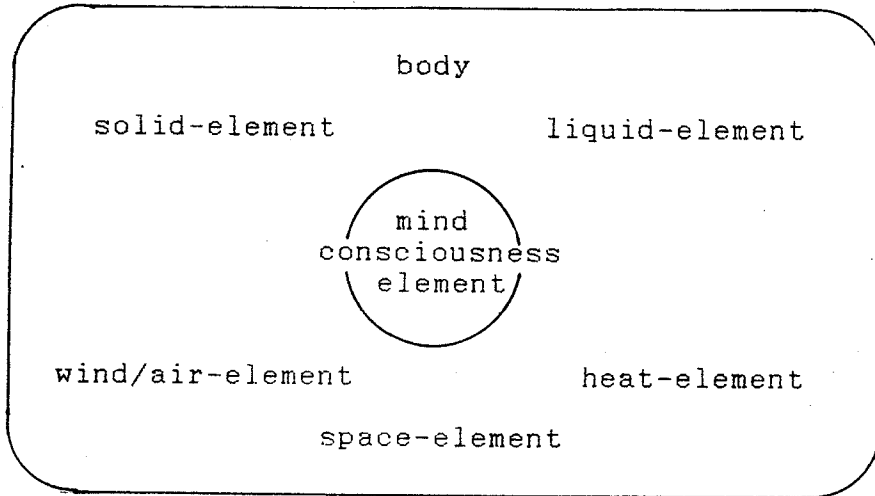


Figure 1 Individual human life composition

(b) Creative thinking as based on Buddhist concept is any form of thinking which leads to speech and actions or production or problem-solving which does not result in revenge, damage or sensual pleasure to oneself or to others (both in the present and the future) but which results in more wisdom, self-reliance and generosity. Self-reliance as discussed here is ones ability to control or calm down internal defilement : greed, anger and delusion.

An interaction between the internal six sense-fields/doors (eye, ear, nose, tongue, body and mind) and the external sense-fields (visible objects, sound, smell, taste, tangible objects and mind-images) without ignorance/consciousness, motivate the desires to develop self defilement/suffering (greed, anger and delusion) affecting the mechanism of the mind in terms of feelings, perceptions, intentions and acts of consciousness and flow of body-elements to produce bad performances through speech and action. This, in turn can result in the harm of oneself or society or both which will then give negative feedback to the mental and the external sense-fields formation.

However, with consciousness and fulfillment of ethical conduct and mental cultivation, self defilements may be attacked and hence lose power and become ineffective within the working process of the mind. Creative thinking will be generated at this stage and create good speech and action. This is undoubtable benefit to oneself and society which in turn gives the positive feedback to the mental and the environment inputs.

2.2 CONCEPT OF HUMAN SUFFERING AND THE NOBLE PATH TO ELEMIMATE IT

The teachings of Buddhism mainly rely on the Four Noble Truths. 1. There is suffering. 2. The cause of suffering is craving/desire. 3. The cessation of suffering. 4. There are eight activities/Noble Path /Central Path/Middle Way for the cessation of suffering .

The eight activities of Buddhism are classified in three groups as follows: 1. Cultivation of ethical conduct/self-dissipline/self-reliance which consists of right speech, right action and right livihood. 2. Mental cultivation/generosity/perseverance which consists of right effort, right mindfulness and right concentration. 3. Insight/wisdom cultivation which consists of right view or understanding of the three characteristics of all existence and right thought/creation.

Figure 2. shows the dynamic flow of the Noble Path in triangle form representing the area of human suffering. If one starts from ethical conduct or mental cultivation, he can pass through his suffering and develop his wisdom. Generally, the growth of human wisdom will assist one to undertake ethical conduct and mental cultivation which will start another cycle of Noble Path development and gradually decrease the area of suffering. When the unification of Eight Noble Paths is applied, the area of suffering will disappear as shown in Figure 3.

Figure 3. depicts suffering in three dimensions by enfolding the area of suffering in Figure 2 in a triangular volumne. In order to reduce the volumne of suffering, the area and the height of the volumne has to be cut out altogether. This is, to overcome suffering in life, one should follow simultaneously both an internal and external Noble Path. Basically, to follow the internal Noble Path is to meditate in order to maintain consciousness at the mind and seek for insight/ wisdom.

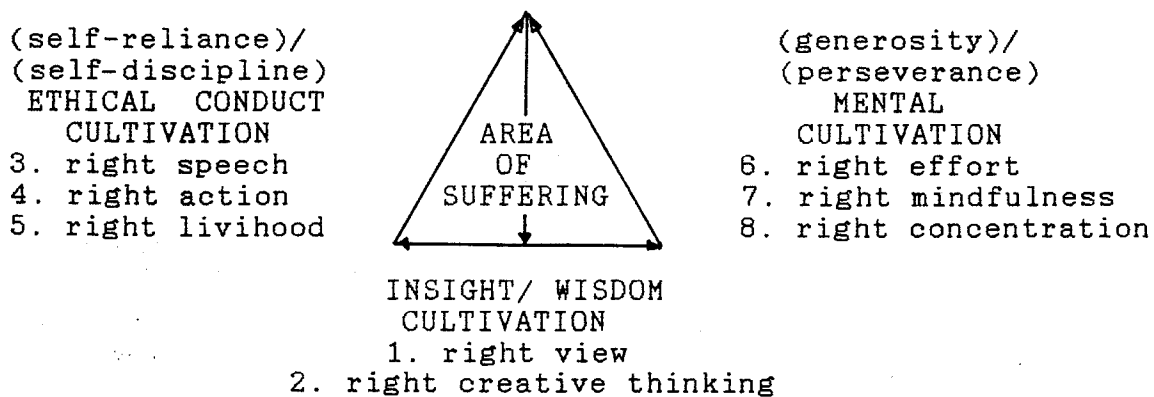


Figure 2 Noble Path to overcome suffering

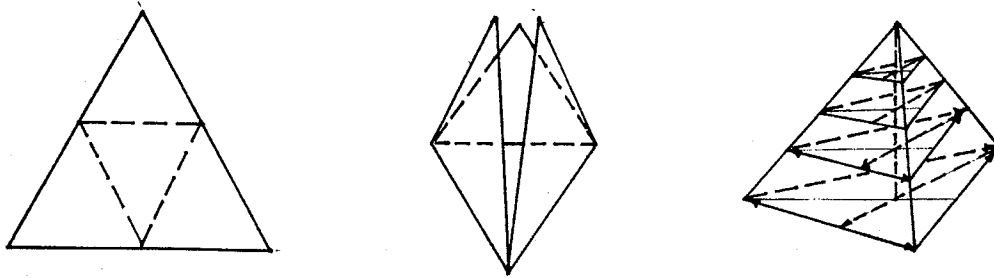


Figure 3 The process of suffering cessation

2.3 CONCEPT OF THE LAW OF CAUSE-EFFECT ACTION

"Good deeds always have good effects while bad deeds usually have bad effects"

3. PROGRAM CONTENTS AND ACTIVITIES

A training package to provide a basic understanding of the changes in human behavior, problem analysis and problem solving through art and a system orientation is applied to promote wisdom. Moral precepts, social manners and religious customs skills are applied to assist in the development of self discipline/self reliance while meditation practice and group service activities nurtur in trainees the development of patience and generosity. The course curriculum is designed for the target ages 9-14 years. The program content is organised over 8 days between 9.00 a.m - 4.30 p.m. as follows:

- The 1st Day
 - Orientation to the children and the parents
 - Getting acquainted
 - Childrens' goals and expectations
- The 2nd Day
 - A self survey : To know oneself
 - Fun with the computer game : mind battlefield
 - Visual art / Drawing
- The 3rd Day
 - Fun with the eletronic kit
 - Responsibility
- The 4th Day
 - To know cause and effect : problem analysis
 - Fun with the computer game : mind battlefield
- The 5th Day
 - Values
 - To know moderation/estimation.
 - To know how to utilize the time
 - Fun with the computer game
- The 6th Day
 - To know society
 - To know a person

- Communication

The 7th Day - Group work for creative project
 - Field trip

The 8th Day - Group Drama : My little home
 - Course evaluation by trainees before parents
 - Seminar on "What children need from parents"
 and Group discussion between committee and
 parents for follow-up activities.
 - Termination

Every morning session between 5.15 a.m.- 9.00 a.m. includes meditation practice, physical exercise and group service activities while the evening session (6.30 p.m. - 9.00 p.m.) provides social manners and religious custom practice, Buddhist story telling and meditation before sleep. The sequence of the sessions is planned in order to accommodate and facilitate both individual and group development and to allow the team for monitoring and evaluating the impact of each content area on the trainees in relation to the other activities. The relationship between the course content areas is shown in Figure 4.

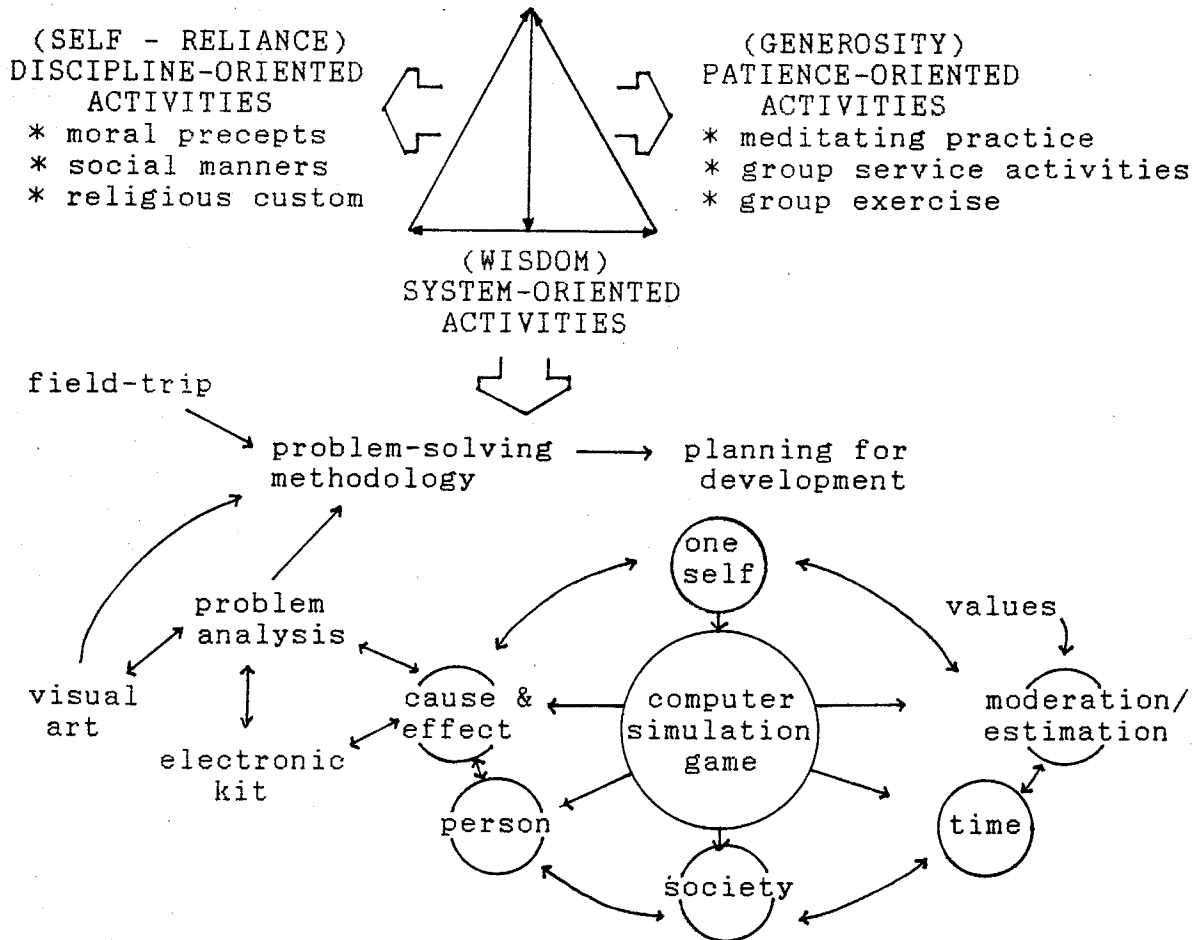


Figure 4 Relationship of Course Content Areas

4. SIMULATION GAME

4.1 OBJECTIVES

(a) To determine the effect of the interaction between external and internal six sense-fields on the process of human decision making and performance.

(b) To motivate the player to learn and become aware of his consciousness which is the heart of this game and simulates human life.

(c) To encourage the player to learn about and become more concerned with himself in terms of internal competition - how to overcome the fight between good and evil within his mind, rather than be concerned only about external competition within society.

(d) To reflect on the changes of ones own performance in terms of life activities . Normally we can more readily see uncertain emotional expression in others, but not ourselves. This can cause us to blame others more than ourselves.

(e) To promote the value of using technology for fun and active participation in playing while learning of Buddhist behavioral science. To replace the traditional subjective and passive method of explanation (from a monk or teacher in school) as this does not promote understanding or interest in laypersons, especially not in children and ones who have less experiences of life.

4.2 DESIGN

(a) Concept development : Mind Battlefield System

The author integrated the concept of Buddhist Teachings as learned from Venerable Dattajivo Bhikku (2) in 1981, and the System Dynamic way of thinking as learned from Dr. Khalid Saeed (3) in 1982 . As shown in Figure 5 the mind system consists of two subsystems, with and without consciousness which provide positive and negative systems respectively. The limit of life expectancy maintains the system in balance.

(2) The Vice Abbot of Wat Phra Dhammakaya, Thailand who has taught in Buddhist theory and practice to laypersons since 1970.
(3) An Associate Professor in System Dynamics at Asian Institute of Technology

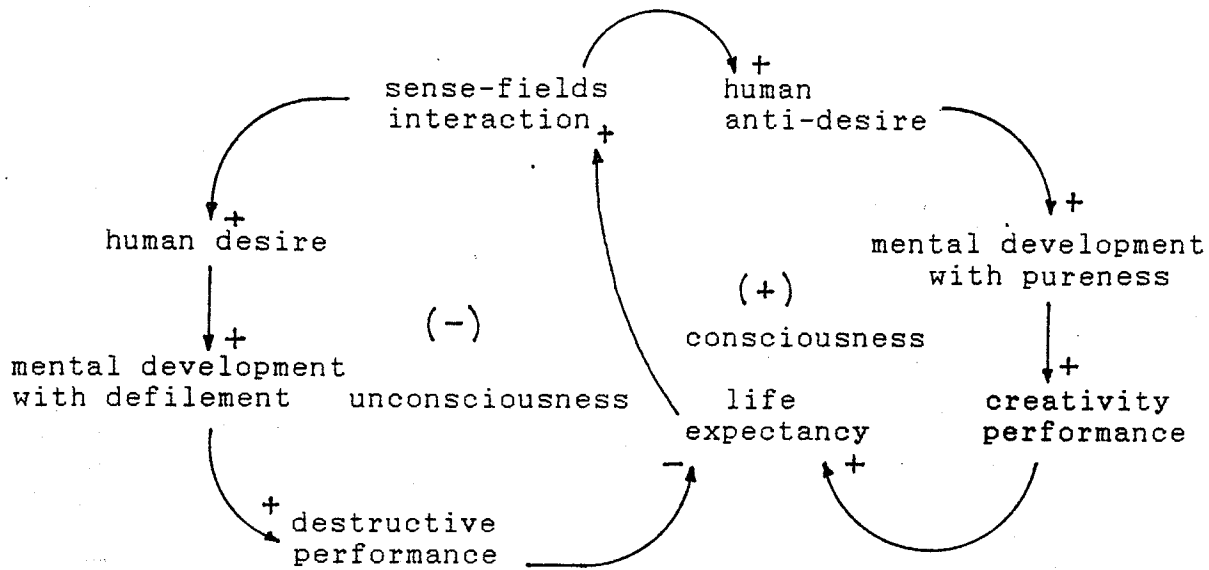


Figure 5 System of Mind Battlefield

(b) Graphic Presentation on Screen

A quadrilateral form is graphically represented as an individual body while a circle is a mind located within the body. The left side of the body shows 6 sense-fields/doors : eye, ear, nose, tongue, body and mind sense-field while the right side represents the performance of speech and action by displaying emotion through facial expression. The upper and the lower parts show the administrative stations for evil and good armies respectively. Within the mind, there are a number of evil members namely greed, anger and delusion represented by different graphic symbols on a small scale while the larger ones with the same shapes represent the good members namely Dana/Tana to give ; Sila to observe the precepts; and Bhavana/Phavana to meditate which can diminish the power of greed, anger and delusion respectively. The symbol of consciousness is the small circle which is effective when existing at the center of mind.

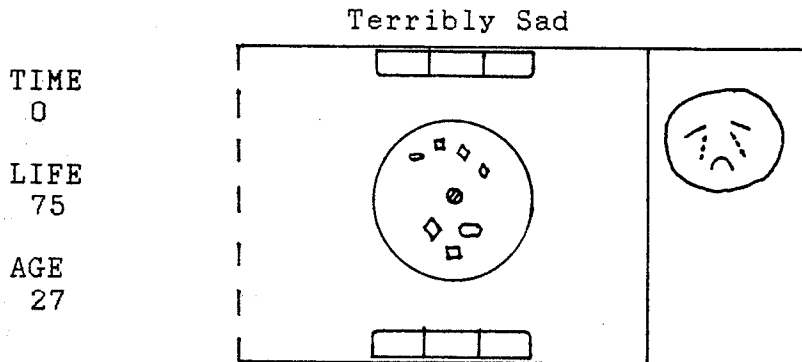


Figure 7 Graphic Presentation of the game on screen

(c) Mechanism

Average life expectancy in both subsystems of the mind battlefield is set as 75 years old. The game starts at a random so that the players can explore how to control defilement at different ages. The game finishes when the age reaches the life expectancy which means the death of life. The interaction between external and internal sense-fields is simulated randomly over time. When the battlefield is controlled by evil while consciousness is moving without direction, then a bad performance will result and there will be a decrease in life expectancy. To conquer evil, the player has still consciousness at the center of the body by pressing the C key and then decide which defilement member should be calm first by pressing the T or S or P keys until the words Tana, Sila and Phavana appear in the left corner of the screen. Then, the player presses the arrow keys to move the good army out to seize the defilement. This results in a good performance and an increase in life expectancy. The movement of the good army is effective only while consciousness is still at the center. The time shown on screen indicates how long consciousness is kept in the center.

(d) Computer Software

The computer software was written in Pascal for the personal computer by Mr. Thada Vitagsabootr, an electronic engineer.

4.3 DISCUSSION ON EXPERIMENT

In 1986 the course curriculum was implemented without the computer simulation game in rural areas. All trainees were local aged 11-15 years. From 1987-1989, the training programs were organized with computer simulation game at a temple in Bangkok. There were a total of 468 aged between 9-14 years from the first to the fifth batch of which 279 were boys and 189 were girls. 70 % of the trainees came from Bangkok while the rests came from other provinces throughout Thailand including both urban and rural areas. The majority of the trainees had good academic records and came from middle income families. The trainees paid for food and electronic equipment while the temple provided lodging and training facilities as well as monks in teaching meditation. Other volunteer teaching team were coordinated by the author and came from private and government sectors with different professional backgrounds according to the program requirements.

Although the trainees came from different family backgrounds and environments, the computer game topic was the most attractive feature for them. 50% of the Bangkok trainees were used to playing computer game available in the market and 10% were addicted while none of the rural trainees had any hands on experience. Five trainees from the same village in the northeast

province told the author that they came from farming poor families; all of them were first grade students in school and one of them had to borrow money from her uncle for participation in the training program.

Before the computer game session, all the children had learned "To know oneself" through group dynamics. They were divided into groups of 5-6 persons and asked to write down their own goodness and the weakness and of other group members. This was after they had been together for a day. They subsequently reported to the group on what they had written and were required to discuss and compare their positive and negative views, firstly mentioning the goodness. Most of them said they felt happy when they were looked upon optimistically and disliked to be observed wrongly from external appearance.

During computer game session, everyone played joyfully and asked for more time to be provided. Initially, the trainees were instructed only on how to operate the machine and the rules of the game without content details. It was observed that all of them were very quick to control the machine even those having no experience before and their expectation were unanimously to have long life expectancy. Later they were asked to answer questions relating to the game content and to record the changes in facial expression on the screen and the age at the end of each play. This time they seemed to be more thoughtful and conscious than in the beginning. After a while they were told in detail about the mind mechanism and its effect on performance relating to the outcome of the previous session, "To know oneself". After the first computer game session everyone was asked to observe and record the changes in their own emotion and facial expression and give reasons throughout the day. It was noted by the teaching team that most of the children tried to be more generous in terms of sharing what they had, smiling and forgiving others' mistakes. This was particularly, noticeable in group work when compared to those groups trained without the computer game.

A session of fun with the electronic kit provided trainees with the opportunity to learn about the system and how it works by encouraging them to construct their own toys with the electronic circuit base. They learned by "doing" under the close supervision of electronic technicians. This resulted in a direct effect on the children's confidence, values and sense of responsibility. In addition, the closed system concept of the electronic circuit of which the children could learn without stress but with enthusiasm, enhanced the session of "To know cause and effect" and the mind system.

The trainees were asked to discuss the effects of the information about goodness and weakness which they had identified in the "To know oneself" session i.e they were asked to think about the effect of good and weak actions. Next the trainees were asked to think of the cause of goodness and weakness. Then the group

discussion led to written work about the causal loop of the mind system which they played on the computer game.

4.4 IMPACT OF THE SIMULATION GAME

(a) Impact on training management

A good impact on training management was that little time was required for training the teaching team as well as for teaching the children during the training period. The teaching team were free to observe trainees' behavior more effectively. Moreover, the simulation game created a beautiful rhythm on organization in the program content and motivated the children to respond actively and think while learning.

(b) Impact on children's behavior

The enjoyment and knowledge concerning human behavior provided by simulation game rapidly developed the thinking skills of the children and the way that they observed their changing behavior patterns in the real world. This change in their attitudes meant they gave more value to respect, discipline and generosity which was apparent in their interaction with each other and with the teaching team. One trainee aged 9 recorded in his notebook that many computer games played at home taught him nothing but this game taught him how to be a "good boy". This meant that the teaching team were freed from spending time on management/discipline and could focus on following sessions since the children could see the value of what they were learning. On the last day of the training, there was a seminar between the organizing committee, the teaching team and the parents to evaluate children's behavior and their performance to compare what the teaching team found, with the parents' attitudes. It was concluded that the development of moral learning through the simulation game was not affected by different ages or academic background.

However, six month follow-up observations by teachers in school and parents at home, revealed that the first grade academic group improved rapidly in both moral and science education while the middle grade group showed little improvement. The most interesting outcome was that the "low" group who had previously been academically and had poor behavior, changed dramatically in behavior in terms of respect and self-discipline and this encouraged the teachers and parents to give more attention to teaching and encouraging those children. The outcome was better learning and interaction with others.

5. CONCLUSION

Although, this paper does not cover the feedback and interrelationship among all activities organized in the training

program, it clearly shows how the development of morality can be integrated with as an input for development of human creativity. To educate people about how to deal with technology, whether innovated by technicians or developers, can only be really successful if a sense of moderation is also imparted by considering inner practice based on a clear understanding of human nature.